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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,250	03/12/2002	Masaaki Nakamura	Q67901	1287

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2100 Pennsylvania Avenue NW
Washington, DC 20037-3202

EXAMINER

GRAY, JILL M

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/019,250

Applicant(s)

NAKAMURA

Examiner

Jill M. Gray

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 10-30 is/are pending in the application.
- 4a) Of the above claim(s) 13-21 and 24-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 10-12, 22, 23, 29 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figure 7, "22". Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4, 10, 22-23, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikawa et al, 4,872,932 (Yoshikawa) in view of Bellamy 3,897,583, for reasons of record.

Yoshikawa teaches a rubbery composite material comprising a substrate and a rubber composition bonded thereto, said rubbery composite being prepared by metallizing a substrate with a thin film of a metal such as cobalt or an alloy thereof wherein the film has a thickness of 10 angstroms to 100 μ , as required by claim 1. See abstract and column 6, lines 24-30. In addition, Yoshikawa teaches that the cobalt content is more than 50% by weight, per claims 2-4. See column 6, lines 20-23. The substrates taught by Yoshikawa can be metals, plastics or ceramics. See column 5, lines 15-40. Also, Yoshikawa teaches that the particular material, shape and size of the substrate used may be properly selected depending on the intended application (note column 5, lines 38-41), further teaching that his rubbery composite materials can be used in the formation of tires, belts, and hoses (note column 4, lines 62-64). In addition, Yoshikawa teaches that his composition is utilized for bonding a rubber composition and a metal substrate such as steel cord, steel tire cord, steel strand or steel wire and other substrates. See column 5, lines 1-7. Yoshikawa does not specifically teach fibers that are substantially non-bundled or fiber aggregate of the type contemplated by applicants. Bellamy teaches the adhesion of metal to rubber using cobalt salts wherein the metal can be steel fabric. See column 3, lines 20-22, Example and claim 5. Accordingly, Bellamy teaches that it is known in the art to use fiber aggregates as substrates in forming rubber-reinforcing fibers. It would have been obvious at the time the invention was made, to form a rubber-reinforcing fiber of the type contemplated by applicants wherein the metal substrate of Yoshikawa is any known to the art, in particular, an aggregate such as a fabric as taught Bellamy.

Therefore, the combined teachings of Yoshikawa and Bellamy would have rendered obvious the invention as claimed in present claims 1-4, 10 and 29.

2. Claims 1-4, 10, 12, 22-23, and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikawa et al, 4,872,932, (Yoshikawa) as applied above to claims 1-4, 10, and 29 in view of Japanese Patent Publication JP 10-053010 (translation), hereinafter the publication, for reasons of record.

Yoshikawa is as set forth above but does not specifically teach that his fiber is substantially non-bundles or is a fiber aggregate. The publication teaches the use of non-woven fabric in a rubber-filament complex of a fiber reinforced member layer in a tire. It should also be noted that the publication teaches the inclusion of short fibers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the rubbery composite material of Yoshikawa and provide it with a non-woven fabric with the motivation of improving the rigidity and stability of the resultant article.

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshikawa et al, 4,872,932 (Yoshikawa) in view of Marshall et al, 4,397,985 (Marshall) in view of Shindo et al, 5,049,447 (Shindo), for reasons of record.

Yoshikawa and Marshall are as set forth above, but do not teach the specific properties of the polyester. Shindo teaches polyester fiber for use in the production of tire cords and belts, said polyester fiber being essentially as claimed in claim 11. See Table 2. It would have been obvious to one of ordinary skill in the art to as the polyester fiber of Marshall, a polyester fiber having the requisite properties as claimed by

applicants and as taught by Shindo with the reasonable expectation of forming a cord to be used as reinforcement for rubber, said cord having a high tenacity, chemical stability, modulus and low shrinkage.

Accordingly, the combined teachings of Yoshikawa, Marshall and Shindo would have rendered obvious the invention as claimed in present claim 11.

Response to Arguments

4. Applicant's arguments filed July 26, 2006 have been fully considered but they are not persuasive.

Applicants argue that the present invention requires that the fiber is substantially non-bundled and is a fiber aggregate further arguing that the twisted tire cord described in Bellamy does not meet the requirements of the present claims.

In this regard, the disclosure of Bellamy is not limited to a twisted tire cord. More specifically, Bellamy discloses that metal in the form of wire tire fabric can be used. See column 3, lines 19-21. Hence, Bellamy teaches fiber aggregates as claimed by applicants.

Applicants argue that there is no indication or suggestion in JP '010 that the use of the rubber-filament fiber reinforcement member, let alone the filament fiber, is attributable to the improved properties, further arguing that the inventive Examples have improved properties in comparison to the Comparative Example of the prior art. Applicants also argue that there is no motivation to substitute the filament fiber of JP '010 for the substrate of Yoshikawa and that JP '010 is silent about improved fiber-rubber adhesion in the present invention.

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In this regard it is noted that applicants are not addressing the rejection over the combination of references, Yoshikawa in view of JP '010. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). As to applicants' arguments regarding improved properties of the instant claimed invention, this assertion is based solely upon JP '010, wherein the outstanding rejection does not rely solely on the structure of JP '010 to reject the present claims but to show motivation to use a nonwoven material as the substrate for the composite material taught by Yoshikawa.

Applicants argue that Shindo describes multifilaments whereas present claim 11 requires a monofilament. Applicants additionally provide a Declaration demonstrating the difference in adhesion properties between the present invention and dry plated multi-filament cords or short fibers.

In this concern, it is the examiner position that the teachings of Shindo would have provided motivation to the skilled artisan at the time the invention was made to use polyester fiber having the requisite properties in the formation of a rubber-reinforcing fiber. The Declaration submitted by applicants has been fully considered but found to be unpersuasive. In particular, the Declaration is not commensurate in scope with the claims and is not a clear back-to-back comparison of the present invention and the cited prior art.

No claims are allowed.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill M. Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Jill M. Gray
Primary Examiner
Art Unit 1774

jmg